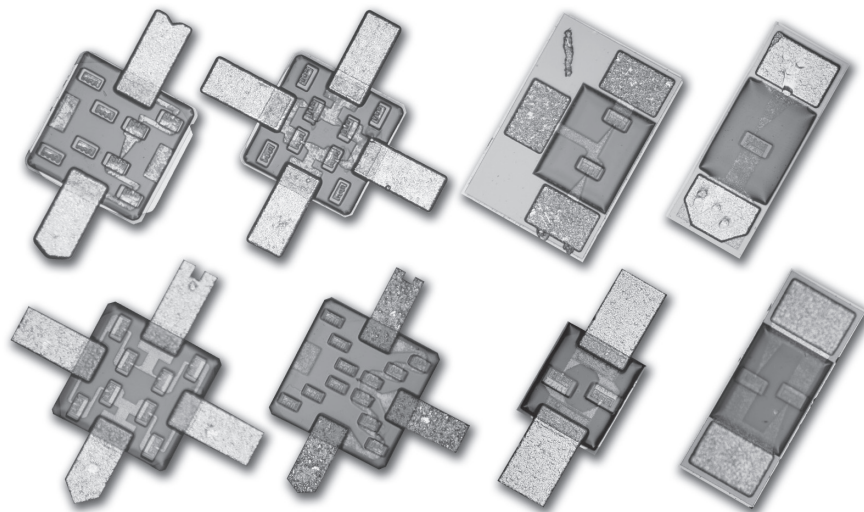


# MGS800/900 Series GaAs Schottky Diodes



## Description

The Aeroflex / Metelics MGS Series of GaAs Schottky diodes are designed for optimum performance in millimeter wave components operating to 60 GHz.

## Features

- Fourteen different configurations
- Beam lead, Flip Chip or packaged devices
- Hi-Rel screening per MIL-PRF-19500 and MIL-PRF-38534 available

## Absolute Maximum Ratings

Parameters	Rating
Reverse Voltage	Rated $V_{BR}$
Forward Current	50 mA
Operation Temperature	-65 °C to +150 °C
Storage Temperature	-65 °C to +150 °C
DC Power Dissipation	75 mW per junction at $T_A = 25$ °C, derate linearly to zero at $T_A = +150$ °C
Soldering Temperature (Packaged)	+260 °C for 5 sec per JEDEC J-STD-20C
Beam Lead Pull Strength, Min	6 grams



## Beam Lead

### Electrical Specifications, $T_A = 25\text{ }^\circ\text{C}$

Model	Configuration	$V_F$		$\Delta V_F$	$V_{BR}$	$C_J$	$\Delta C_J$	$R_S$	Outline
		MIN / MAX	MAX	MAX	MIN	MAX	MAX	MAX	
		mV		mV	V	pF	pF	$\Omega$	
MGS901	Single Junction	650	750	---	5	0.06	---	7	GB110
MGS902	Anti-parallel Pair	650	750	20	5	0.10	---	7	GB210
MGS903	Series Tee	650	750	20	5	0.06	0.02	7	GB310
MGS904	4 Junction Ring-Quad	650	750	20	5	0.06	0.02	7	B85
MGS905	4 Junction Bridge-Quad	650	750	20	5	0.06	0.02	7	B86
MGS906	4 Junction Series-Tee	1300	1500	40	10	0.04	0.02	14	B91
MGS907	8 Junction Ring-Quad	1300	1500	40	10	0.04	0.02	14	B85
MGS907A	8 Junction Ring-Quad	1300	1500	40	10	0.06	0.02	12	B85
MGS907B	8 Junction Ring-Quad	1300	1500	40	10	0.08	0.02	10	B85
MGS908	8 Junction Quad	1300	1500	40	10	0.04	0.02	14	B86
MGS909	6 Junction Series-Tee	1800	2100	60	15	0.10	0.03	21	B90
MGS910	12 Junction Ring-Quad	1800	2100	60	15	0.10	0.03	21	B87
MGS911	12 Junction Bridge-Quad	1800	2100	60	15	0.10	0.03	21	B88
MGS912	Four Junction	2500	2900	---	20	0.03	---	28	B89
Test Conditions		$I_F = 1\text{ mA}$			$I_R = 10\text{ }\mu\text{A}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$	

## Flip Chip

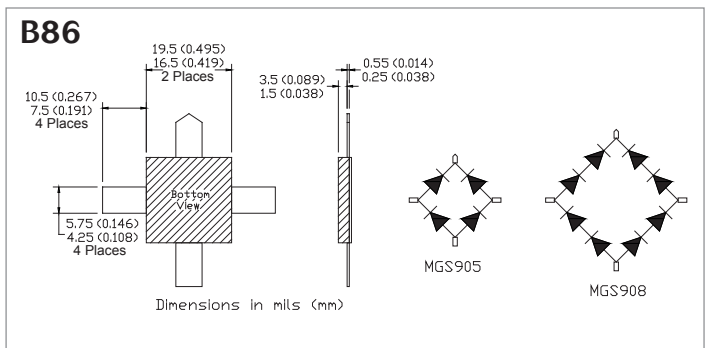
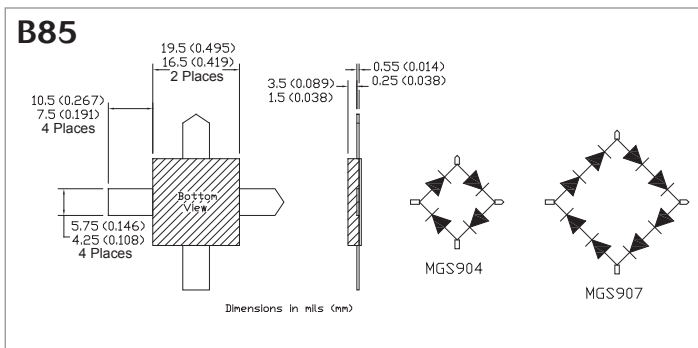
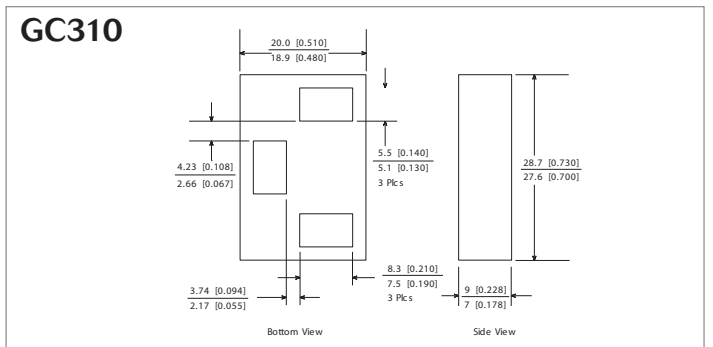
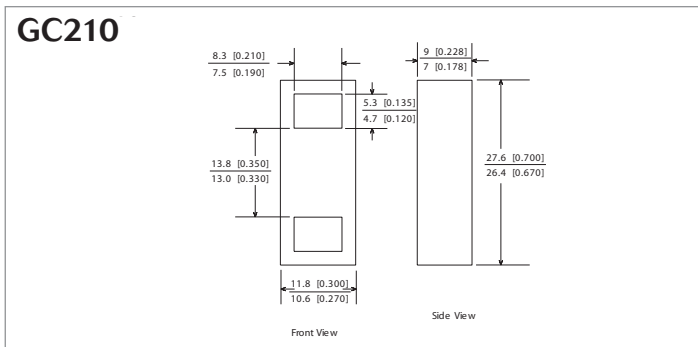
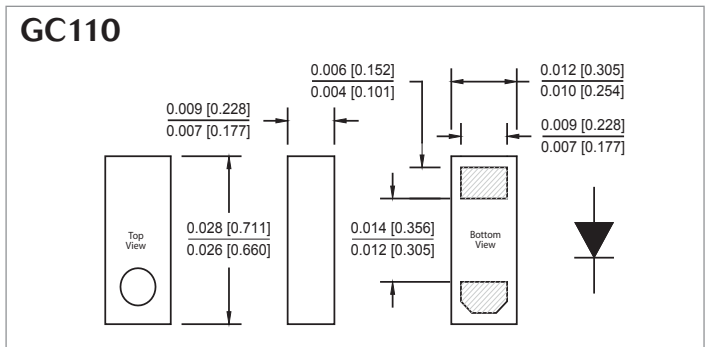
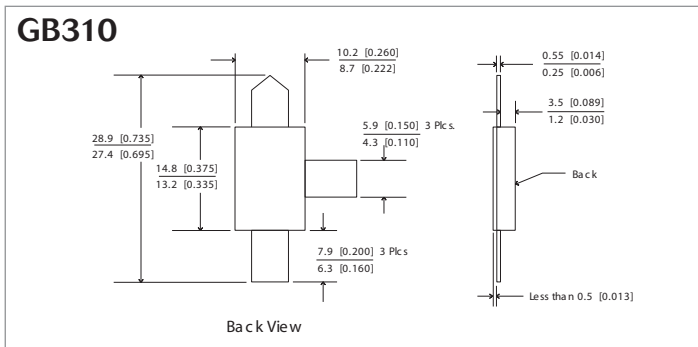
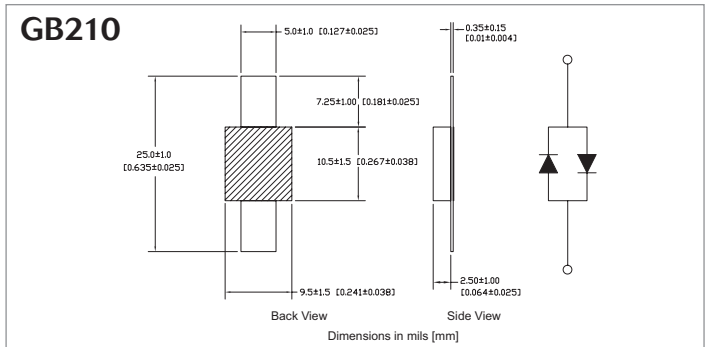
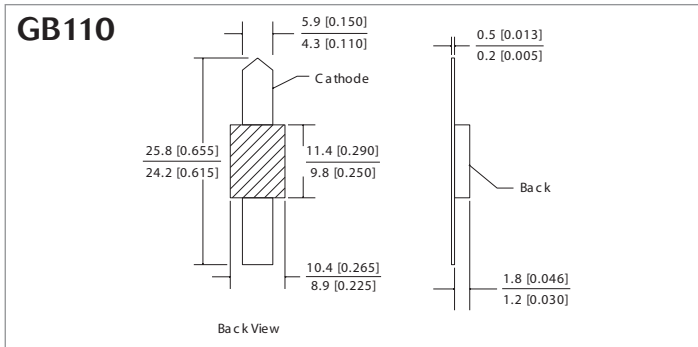
### Electrical Specifications, $T_A = 25\text{ }^\circ\text{C}$

Model	Configuration	$V_F$		$\Delta V_F$	$V_{BR}$	$C_J$	$\Delta C_J$	$R_S$	Outline
		MIN / MAX	MAX	MAX	MIN	MAX	MAX	MAX	
		mV		mV	V	pF	pF	$\Omega$	
MGS801	Single Junction	650	750	---	5	0.05	---	7	GC110
MGS801A	Single Junction	650	750	---	5	0.075	---	5	GC110
MGS802	Anti-parallel Pair	650	750	20	5	0.10	---	7	GC210
MGS802A	Anti-parallel Pair	650	750	20	5	0.15	---	5	GC210
MGS803	Series Tee	650	750	20	5	0.06	0.02	7	GC310
Test Conditions		$I_F = 1\text{ mA}$			$I_R = 10\text{ }\mu\text{A}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$	

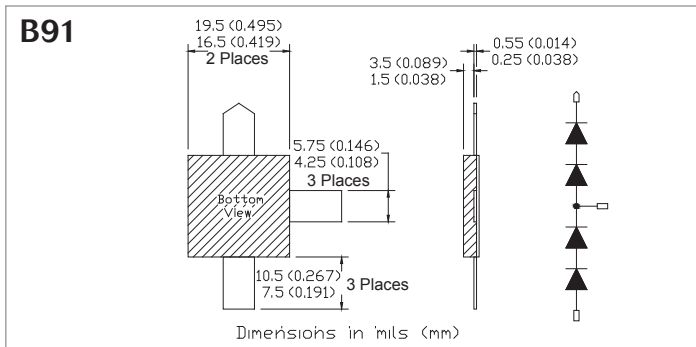
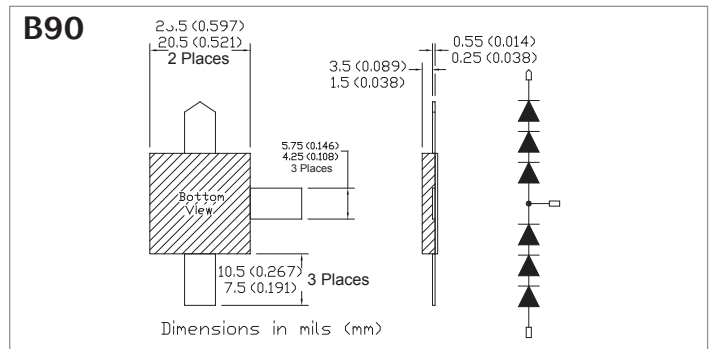
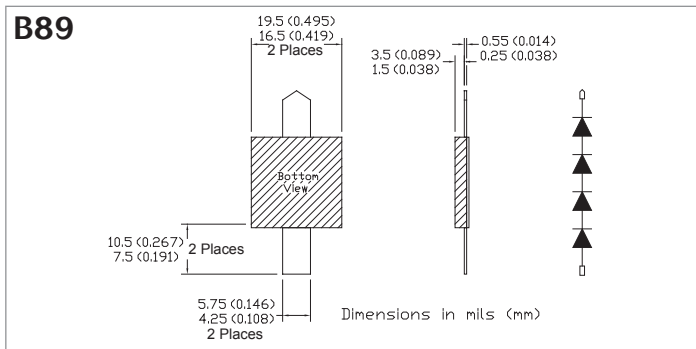
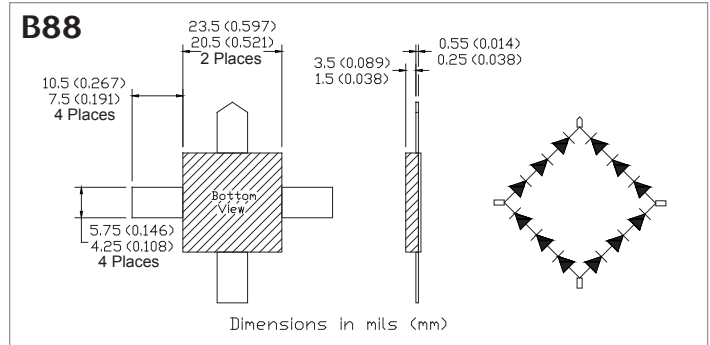
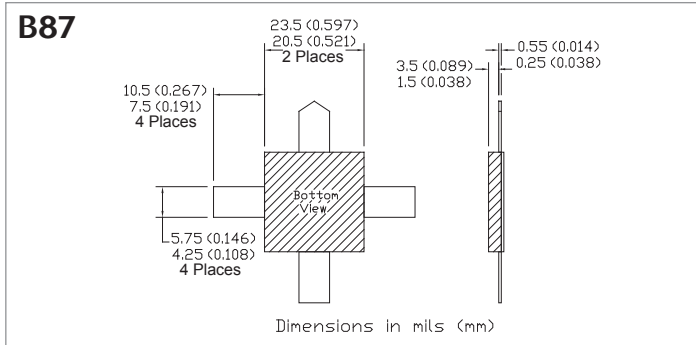
# MGS800/900 Series GaAs Schottky Diodes



## Outline Drawings



## Outline Drawings



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